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FEVER

Stagpin

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Samel Jones

Fever of Philad.a of 1820

admitted March 29th 1822

A Dissertation
on the
Causes, Nature, Symptoms, & Treatment,
of the
Endemic Fever,
which prevailed in the city of
Philadelphia,
during the Summer of
1820.
exhibiting a Pathological division
of the
Yellow Fever,
into four, distinct classes,
with the diagnostic signs, & treatment,
appropriate to each.

by

Samuel Jones.

"Plus operis habet, quam ostentationis.

Quint.

To

Nathaniel Chapman. M. D.
Professor of the Institutes, & Practice of Physic,
And Clinical Practice, in the
University of Pennsylvania.
&c. &c. &c.

My very distinguished preceptor, and friend.
In dedicating this work to you, permit me to acknowledge, how much I owe, to your talents as a teacher, and to declare my unqualified admiration, of those exalted virtues, which throw an imperishable lustre, around your name.

When Rush, the oraculum medicinæ of America, full of years, of honours, and blessed with the affections, of his Countrymen; obeyed the mandate, which called him to his reward, to you, the genius of medicine, entrusted his robe, and his commission.

That you may long live, to extend the limits of science, to dispense those truths, which

whilst they improve the understanding, expand the soul with benevolence, and are full of blessings to mankind. That you may long live, the people's hope, when the devastating pestilence threatens, is the sincere prayer, of one who values himself the more, for having been your Student.

The Author.

To

Philip Syng Physick, M. D.
Professor of Anatomy, in the
University of Pennsylvania. &c, &c.

So honourably associated, in the recollection of every American Physician, with the disease which is to be the subject of the following pages; there would seem to be a propriety, in the liberty I am taking, of introducing your name, in this place.

Sudden, and terrible, as the sirocco of the desart, the disease, which in periods not

long passed by, brought unexampled desolation, and dismay, into our peaceful city, is shorn of half its terrors, since you pointed out its Gastric origin, and inflammatory character.

Though it has been more especially your province, to cultivate, and preside over, the department of Surgery: the Science of Medicine, has derived some of her richest trophies, from your profound, & unwearied researches, into the living book of nature.

It has been your ambition, rather to accomplish, than assert your claim, to great and glorious achievements. Above the boast, of foreign greatness, you have not been less honoured, by the envy of the old, than the admiration, of the new World.

"Semper honos, nomenque tuum,—
—laudesque manebunt."

Samuel Jones.

"Viscera torrentur primò; flammæque latentis
Indicium rubor est, & ductus anhelitus ægrè.
Aspera lingua tumet, trepidisque arentia venis
Ora patent: auræque graves captantur hiatu.
Non stratum, non ulla pati velamina possunt:
Tantaque sunt miseris invisi tædia lecti;
Prosiliunt; aut, si prohibent consistere vires,
Corpora devolvunt in humum, fugiuntque Penates
Quisque suos: sua cuique domus funesta videtur:
Dum visum mortale malum, tantæque latebat
Causa nocens cladis; pugnatum est arte medendi:
Laitium superabat opem; quæ victa jacebat.
Et, quia causa latet, locus est in crimine notus".

On opening the door, to the bedside of the patient, and comparing what we see, and what we feel, with the massive volumes, which in other times, have laboured to unfold the causes, the nature, and the treatment, of fevers; What are the distorted images of the imagination and of a sickly credulity, which start up before us; our senses are appaled, not edified -

Conceived in the brain, intoxicated with the mania of explaining every thing, nourished by splendid, and imposing hypothesis; and defended from decay, by this imperishable qualification, Ipse dixit; false theories, have begotten false facts, and these in their turn, have begotten other theories, upon whose wreck, others have been erected.

Pursuing rather the glittering ignis-fatuus, of imagination, than the pure, and sacred light of truth, Such illusions have been common in the history of the human mind, wherever Medicine has had a disciple, or Science a votary.

It is time for those, whose task it is, to unlock for us the treasures of nature, to come out of their closets, to bequeath to the flames, the gilded theories, and learned dreams of library mongers, and from nature's unfolded pages, pourtray disease as it is.

The present is an auspicious moment, the horizon of medicine, glows with a lustre, transcending all the past. Science ceases to sigh, and wither in her cave, but expanding her wings, in the pure atmosphere of truth, rejoices in the dissemination of wholesome knowledge.

It is a period when Facts, are only counted, the soul of science, and the philosophy of medicine, the passport of pages, which have been handed down, through centuries of time, unaltered, and unsoiled, amid the revolutions of systems, and hypothesis, which have perished and are forgotten. Facts are the only legacy, which can endure to immortality.

But many important points, are yet in debate, in which every approach to truth, has

has been cut off, by the discordance of sentiment, and thick obscurity of opinion, which has agitated the wisest, but more by the angry cavils, and sophistries, of wounded pride. Such is peculiarly the fate of the theme before us —

Contemplating the epidemick of 1820, the hesitating diffidence, with which every one asserted his opinion, it will be conceded that something remains yet to be done, both to elucidate its nature, and improve its practice. As if it were some sacred thing, — — — — — — — — — — — — — — able writers have lightly touched, or vacillating, between their own doubts, and the opposing doctrines of others, have mysteriously exclaimed, the greater the sphere of light, the greater the circumference of darkness, that envelopes it.

Feeling that neither my talents, nor acquirements, are capable of doing justice, to this subject, and not ignorant of the test by which my opinions will be examined, I shall present without apology in a

in a manner as plain, and intelligible as I am able, what facts I have thought interesting, and what opinions have appeared to me the legitimate offspring of facts.

It is as well known as any historical fact, that whenever yellow fever has appeared in our city, the diseases of its vicinity, and of great extent of adjacent country, have shewn in various degrees, an imitative aspect, being the highly inflamatory forms of Bilious remittents, Cholera, and Dysenteries, unusually intractable, and mortal; the disease in some sections of ~~the~~ country, taking on the same symtoms, and little inferior in malignancy, to the unshorn yellow fever, itself.

This was strikingly true of 1826.

It is equally notorious, that during the reign of Typhus, I mean the Typhus Petechialis, of New-England, whose slow but deadly march, swept the

the whole face of our country, (never to be forgotten by the author, or by Medicine bereft of the illustrious name, which gave her a Character, and raised the literary glory of our country.) Doing homage to its presence, feebler forms of disease, every where put on its livery.

Bilious and inflamatory fevers were less frequent, no case of decided yellow fever, put out its head, and for a time the lancet was almost laid aside.

Since the subsidence, of that form of disease, Choleras, Dysenteries, the Bilious Remittents, &c, have again sprung into existence, and have given the fashion, to the diseases, throughout our country, and increasing in strenght, seemed to announce the approach of the yellow fever, which has at lenght arrived.

Hence, it would seem that Typhus and Yellow fever, are antagonising powers. The one retires as the other advances, They choose for their devastations, different periods of years, and dif=

different seasons, the one comes out in the noon of midsummer, its favourite haunt the crowded city, whose foul exhalations, being undisturbed by the the salubrious breeze, that sweep the adjacent plains. It revels on the hotbed, of putrescent materials, now fermenting under a tropical heat. It lurks in greatest vigour, along the humid air of the watercourse, mingling its own poisonous breath, with the foul distillations, there eliminated, and having thus acquired that force, without which it had been inert and innocent, it assails whom it will, with fiendlike destruction.

Whilst the other comes out in the chill damps of winter, takes a less discriminative range, but tarries rather, in the illfated hovel, of the poor and comfortless.

In the wise disposition of events, we see this mercy in the pestilence; They never go hand in hand to the slaughter. I believe it is a law, which never errs, that two epidemicks, specifically

specifically, different in their nature, cannot coexist in the same place, nor can two morbid actions, coexist in the same system.

In the widely diffused morbific constitution of the atmosphere, exists the pestilential principle, which vegetates, where it will, and impresses disease, with a specific character, whatever cause, may have called it into existence, or modified, its nature.

That the atmosphere, the most heterogeneous matter in nature, should sometimes, be the source of disease, we might a priori expect; varied, by ~~by~~ different intensities, of heat, and humidity, it may hold in solution, whatever is formed in the matrix of nature. There the grateful spices of the field, mingle with the loathsome halitus of putrefaction, and changes, are there, constantly going on, unseen, and unknown, but whose phenomena sometimes delight or astonish us, Hence the meteor, dancing upon the night, the voice of thunder, the precipitation of massy rocks, which

which, volatilized, in natures great laboratory, floats over our heads. Then moves the hidden pestilence. Epidemick, and contagious diseases, have different sources, they never come in aid, one of the other, or unite, to produce the same effect. This is a law, to which I am satisfied there is no exception.

A remarkable fact, which may not be misplaced here, equally illustrative of the strong local partialities of epedemick diseases, and of their noncontageous nature, occurred under my immediate observation. Early last summer, a fever of a highly inflamatory, Bilious remitting character, appeared in one of the wards of the Alms house, it spread rapidly, through the ward, no one residing in it escaped, Nurse nor Assistant.

The infected, about forty in number, were young, heathy, females, from the age of fifteen to thirty, all, except three recovered, two of whom were removed as supicious cases, and died, with symtoms of great malignancy. The third having

having been of very intemperate habits, immediately sunk and died.

Doctor Parish, believed it depended on a specific contagion, and was the more convinced of this, when a few new cases being admitted, they all sickened on, or about, the fifth day, after admission.

It occurred to me, that this ward, being at the top of the house, the entrance to it a stairway, with which, the doors of five large wards below, containing some hundred sick, and Infirm, communicated, which now, were all thrown open, on account of the warmth of the weather, the foul halitus, of each ward, rarified, and floating out at the top of each door, in a constant stream, ascended the stairway, and was stayed, in the ward above, through which it was obliged to circulate, before it could escape.

Imagining this effluvia, though the senses could not detect it, to be the cause of the fever, and having closed the door, which admitted it,

it. and given another direction, to the current, immediately, six more were admitted into the ward, in the midst of the sickness, none of these took sick, tho, prior to this, not one had escaped.

In no other part of the house, at this period, was there a similar disease, notwithstanding the constant, and unrestrained communication, between the wards. With evidence of contagion, strong as anywhere occurs, this disease proved itself not contagious.

It is rational to look for its source, to the morbific constitution, of the atmosphere, made efficient, by the particular distemperature, of the air of the place. Whilst, the antiquated hydra of contagion, yet lingers amongst us, it deserves not lightly, to be passed by, or in defiance of the law of epidemicks, it will continue to be one of the causes, of yellow fever. Dwelling in the imagination, it possesses all the bane, of an infected district, subject to a specifically

~~Spreadeth~~ morbific atmosphere; It pursues its victims with terror, until pale, and trembling, with false alarms, they are the easy prey, of other causes. But the insatiate fiend, spares not even the vanquished, it withholds from the languishing sufferer, the minister of relief, he groans, delirious in agony, 'til nature perhaps, allows some respite, a moments sensibility returning, he awakes, he looks up for that sympathy, which smiled with him in prosperity, to sooth his anguish, but from the strong impulse of self preservation those nearest to his heart, have deserted him, the ties of nature and of consanguinity are broken, hope dies within him, he turns from the faithless world, sighs and expires. This is no picture of fancy, real life has been blotted with such scenes.

A young Gentleman with whom I was acquainted, becoming ill in the infected district, left the city to be nursed by his fond Mother,

mother and family, who resided but a small distance in the country, he was met with a cold repulse as one whose touch was fatal, whose breath pestiferous. He retreated to the stable, and died neglected beside the more feeling beast, his body almost denied the refuge of a grave.

Contagious diseases are never epidemick, and differ in being less partial to clime or country, equally regardless of the extremes of heat, and cold, once abroad, they move on in steady march, until they make the world their theatre of triumph, and live forever, unless some champion of medicine, some Jenner interpose.

But epidemick, unlike contagious diseases, depending entirely on the state of the atmosphere, are extinguished, or enkindled, at its will.

Unlike contagious diseases, epidemicks, are so much influenced by the particular existing cause, and circumstances of the place the inhabit, that whilst within certain narrow

narrow limits nearly all die, at the distance of a few hundred feet the disease is quite within the power of medicine. A fact noticed by the historians of the yellow fever, and remarkably true of 1820.

Unlike what happens from contagious fevers, an attack of yellow fever, though it may afford the system of defence against its future invasions, this security is neither certain, nor permanent; examples abound in proof of this position, those inhabiting or born in yellow fever countries, & being seasoned to the poison, inhale it with impunity.

Absent a few years the susceptibility is awakened, and now returning, they are equally with the stranger its victims, thus obeying the laws of ordinary, & of epidemick poisons, unlike the secreted contagion.

I am now prepared to consider the epidemick of 1820 in all the variety of its character as being specifically but one disease divisable

divisable into a number of distinct grades. From what opportunities I have had, of comparing them, I hope to make evident, that there was a specific relationship between the mildest and most malignant forms.

This leads me necessarily to treat of the relationship, which exists between Bilious, and Yellow fever, and I trust in the event, what I shall have assumed on this point, will not appear altogether gratuitous. Where yellow fever makes its annual visits, its bilious character is uniformly asserted, and its contagion denied.

It is well known that whilst it deals mildly with the natives, in the remediable shape of the Bilious remittent, the stranger, less seasoned to the poison, suffers the fatal yellow fever. But before I enter on this discussion, it will be right in me, to speak of the sources, the nature, and the symtoms, of that with which I was most acquainted, the epidemick of this city of 1820.

Beginning by a few cases of its milder form, early in June, it was at its height in the midst of August, and ceased to be epidemick in September.

It first appeared along the narrow lanes, alleys, and courts, of the southern section of our city, where negroes chiefly congregated, whose narrow ill conditioned hovels, for the most part constructed of wood, contained a family, sometimes a plurality of families on every floor; whose very cellars were inhabited, and whose wretched inmates crowded them together lead the most filthy, and dissolute lives, often without change of raiment). Their alleys are unpaved, and never purged by the scavenger, and into which every kind filth, and kitchen refuse, for years collecting, beaten up into an undefinable mire, lutulent from the continued moisture of the Spring, and now fermenting under the hot sun of Summer, emitted a habitus, most nauseous, and disgusting, to those led thither by duty, or curiosity. I have no

no idea however, that the degree of sensible qualities, of an exhalation, has any connexion, with its poisonous power. it may, or it may not be associated with odorous matter. Many of the most active poisons we have, are inodorous and almost tasteless. Three of these brought from Atkinson's court, were the first received into the Alms house. In these was seen an unfavourable prognostic of the ensuing summer. These were of such a character, as to induce Mr. Wilson, one of the house surgeons, prudently to call the attention of the Board of Health, who were already observing its origin, and with the wisest policy adapting remedies to the causes, of this disease. The cases refered to, were not examined post mortem in the house, but subsequently coming under the notice of Dr. Gibson upon the field, he without any knowledge of the history of the cases, informed me afterwards, that he suspected them to have been cases of malignant fever.

Of this disease of the Negro alleys, nearly 300 cases, were brought to the Alms house. The whole number of whites included, did not exceed the average of deaths, which was about 25 to the hundred. Though a number of these cases, originated in labourers employed upon the wharves and others residing within, or having visited the infected district, the distinction of character between them, and the malignant fever which then developed itself, was for the most part, upon close inspection clear and undeniable, whatever alliance may have existed between them.

I was frequently visited during the prevalence of this endemick, by a professional gentleman, and correct observer of facts, who has seen much of the yellow fever of New Orleans, where he has been engaged in practice, and made many post mortem examinations.

Having seen the disease of the Sugar

Sugar house, and assisted in a number of dissections, he assured me of his entire conviction, of the specific identity, of the two, and that disease, having as few of the characteristics of yellow fever was in New Orleans, arranged under the same denomination of fevers.

I shall present my own view of its nature & pathology, derived from a careful observance, of its phenomena in the living, and elucidated by the scalpel. It becomes me first to speak of the symtoms, and first, of

The premonitory symtoms.

These present to the curious, an interesting theme for speculation, but more from their intrinsic importance, demand our consideration. Were the knowledge which we conceive to be attainable on this subject, fully impressed on the medical mind, it might do much, to arrest the walk of death, especially to curtail the dominion of epidemicks.

Amongst the phenomena that announced the approach of this disease the —

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the following are the most peculiar, and most worthy of reflection, immediately preceding those sensations which declare him ill, the patient is remarked to have a flow of spirits, surpassing his habit, a convivial, irrepressible feeling, mingles in his actions, and breaks out in the strongest expressions, giving a new and peculiar animation to his countenance, but no alarming apprehension is excited in the patient, or those about him, commonly it carries a face so decep=tive, that he feels it, and all regard it, as the comple=tion of health, charmed with existence, as if he now first began to be, he revels in that security which dreams of no danger, but the more overwhelming is the tempest that follows, when the elysian spell is broken, an intoxication succeeds, which is more closely allied to that from wine, which soon sinks into languor of body and mind, and disposition to sleep, from which he is aroused by chills, severe pains in the head, and back, stiffness of the joints, the eye is red, suffused, and sometimes

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sometimes, protruded, the skin is hot, dry, and harsh, there is great restlessness, and anxiety about the praecordia, the stomach soon gives way, and copious vomiting comes on. Thus introduced it runs its devious course.

The expression of countenance conforming to the morbid hilarity described, was at this time equally striking, and peculiar, and having once taken possession of the mind, it is like the voice of an intimate friend, which cannot possibly be described, though immediately recognised.

Considering health as a unit, disease may consist of an infinite variety of impressions, and derangements of function.

The premonitory signs of disease, also, far from conforming to any uniform plan, may consist in any disturbance of the equilibrium of healthy action.

Next to the pleasurable excitement of mind of animal power and appetite the most

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most common precursors of this disease, were languor of mind, depression of spirits, lassitude from little or no exercise, vertigo, fainting, drowsiness, heavy sleeps, incubus, morbid vigilance, perversions of taste, nausea or vomiting, a dull pain of the side, pains of the head, back and limbs, cramps, creeping chills, costiveness, unnatural feces, night sweats, sudden and profuse evacuations, from any of the emunctories, a suppression of urine, a sense of fullness of the head, a yellow, dusky, red, or watery eye, weeping, an altered expression of the eye and countenance, fatuity, failure of memory, or of any of the intellectual faculties, an unusual quickness of perception and thought, a sudden developement of new dispositions.

I am quite persuaded from what I have seen, and from inquiries which I habitually made, that few cases commenced without some, or a combination, of the

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the precursory symtoms described, but more especially with a morbid, and pleasurable excitement, and with a characteristic expression of countenance, which whilst it necessarily escapes common observation, may easily be perceived by the eye, that is familiar with the peculiarities of morbid excitement.

"Amid the heavens
Falsely serene, deep in a cloudy speck
Compress'd, the mighty tempest brooding dwells,
Of no regard, save to the skilful eye." Thomson

What fact can be more interesting, or practically important, yet in the history of fevers, this phenomena has hardly been noticed, and few are aware that it ever occurs, its nature seems buried in the obscurity of physiological conjecture, causa latet vis est notissima.

But may we not imagine a peculiar poison, admitted into the system, and about to develope its action, the vis conservatrix takes the alarm,

alarm, and exciting to the maximum, all the moving powers of life, an effort is made to eliminate the poison, or to arrest, and subvert the morbid tendency.

The System, like an elastic bow, rebounds with a force corresponding to that with which it was bent, but when its cords are drawn too lightly, its cohesions separate, and it ceases to react. Be this as it may, every action of the moving machine is quickened, circulation, secretion, sensation, heat, sensorial and mechanical powers, are all increased, and whilst a balance is preserved in these actions, the sensation is highly pleasurable.

Le Cain, the celebrated ~~the~~ tragedian, about to enter on the stage on a certain occasion, observed that he felt an unaccountable exhilaration of mind, and accession of animal strength, and exulted in the confidence of certain success.

Such indeed was the effect that the audi-

audience though long accustomed to admire him, were astonished, as if some new prodigy had suddenly appeared, he entirely surpased himself, but the rich melody of applause, had not ceased to vibrate on his ear, when he became suddenly ill, and in four days was a corpse.

Doctor Hosack in his notes on Thomas' practice, edition 1820, article Croup, has these remarkable words. "In the forming stage of croup, the child sits laughing and playing upon the lap of its mother, manifesting a very unusual but morbid degree of animation" I cannot forget in the case of a child that was dear to me having observed a playfulness, and exhilaration of spirits above her habit, on the evening preceding the fatal night, on which she died of croup.

Considering the high practical importance of an early prognosis, and of premonitory symptoms. especially during the reign of epidemicks.

I shall introduce two cases, which first called my attention to the subject, and made an impression never to be forgotten.

A young woman about 24 years of age, having recovered from an unimportant surgical disease, was engaged for a time, as an assistant nurse, whilst prescribing in the ward she came to me, expressing a desire to be discharged.

I was then astonished at the peculiar beauty which lighted up her countenance, and the exhilaration of her spirits, her eye was most remarkable, there seemed to be an acuteness of intellect, and capacity of mind new to her, with the liveliest sensibility she thanked me for her health, and repeatedly declared, she had never in her life felt so well. I perceived her manner had something singularly sympathetic in it, all with whom she spake, seemed immediately to participate in her inspiration, her pulse beat 100, and was natural, in

in volume, and force, not from the gaiety of her manner, but from the peculiar expression of countenance, I imagined this to be a case of morbid hilarity, which I had known in two or three instances, to precede an attack of fever. I pointed out this case, and my convictions with regard to it, to one of the gentlemen of the house, but found him incredulous, attributing it to common causes, or possibly to a slight intoxication, from which I thought it clearly distinguishable.

Without alarming her, I recommended her to tarry a day or two longer. It was now eight in the morning, I saw her again at eleven, already a great change had occurred, she was languid, was reclining upon the bed, and seemed abstracted, with an expression of anxiety, startled when spoken to, paused a moment, and then replied in a quick, and incoherent manner, her pulse slow, and hardly perceptible, her eye was watery, as if from weeping. In the afternoon she became quite

quite delirious, talked incoherently, but made no complaint. At eleven at night I was sent for, suddenly her breathing had become short, and laborious, she had a severe pain across the forehead, her eye seemed to start from the socket, pulse more full, but slow, irregular, and yielding, a coldness pervaded the surface of her body, sensible of a great inward struggle, she inquired frequently whether we thought she was dying, and seemed more terrified with the horrors of death, than a malefactor at the stake. In about half an hour, she had a spell of vomiting, and then obtained relief, she soon again became exceedingly restless, and was so all night, about ten next morning, whilst I was present, immediately after another violent paroxysm of vomiting, her eye became suddenly fixed, the pupil dilated and she fell dead instantly. The stomach was found highly inflamed, but contained no black vomit, the vessels of the pia mater and of the brain were

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was found highly injected with blood.

But a few days after this the same morbid hilarity, arrested my attention, in a healthy young black woman. With the force of the striking example before me, I was alarmed, on examining her pulse, it was almost absent, she was put to bed, when it immediately rose, but was still hobbling, and slow. A cathartic was administered, and she was carefully watched, in the middle of the day, she was observed to fall asleep, and about three in the afternoon, to complain of rigours, and headache; which having subsided, she became more talkative, and delirious. She became evedently very ill, tho, she presented no very positive symtoms, her skin was never harsh, or above the natural temparature, on her countenance there was a feeble smile, or risus sardonicus, the region of her stomach was somewhat tender when pressed upon. About the third day, the skin had a peculiar cadavrous feel, and was

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was torpid, she had a hiccough, and made frequent unsuccessful efforts to vomit, she died on the night of the third day. her stomach was found to be inflamed, containing a dark coffee ground matter.

From the entire absence of complaint, and external evidence of disease, she was hardly perceived to be ill, by those around her until the third day, when very great prostration of power occurred.

In other cases less striking, and less fatal, I have witnessed the same premonitory signs in which I have never been deceived they consisted often in the mere expression of countenance, without any effect on the manner of the person.

I come now to speak of the more remarkable symtoms, and phenomena, which exhibit the general character of the disease.

The morbid hilarity, of which I have spo-

spoken, was succeeded by a corresponding depression of spirits, to which succeed lassitude, vertigo, sometimes syncope, drowsiness, rigours, pain in the head, very severe across the forehead, extending down the spine; and often to the extremities, &c.

The eyes had at all times a peculiar expression, were suffused, red, protruded, often more widely open than natural, frequently open in sleep; the vessels of the tunica conjunctiva were in a few instances highly injected with blood, the early redness of the eye, changed to a muddy, and frequently to a deep yellow. I have seen the cornea depressed, and irregular, as if from absorption of the aqueous humour. In a few fatal cases the eye was bright to the last, and only changed in expression. When the pupil became dilated, and the eye suddenly fixed, death always followed in a few minutes.

The Tongue was early covered with a white fur, changing to brown, and finally to

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to black, and thickly studded over, or a thick brown ridge of fur, collected along the centre only, or perfectly clean, and natural, in some of the worst cases, or a delicate white fur, disappearing and renewed, every few hours, occurred in three instances. (Two of these died) or rough, hard, dry, corticated, to the feel, and insensible, or glazed, dry, and excessively hot, or tremulous, or contracted, diminished in bulk, or paralyzed, and immovable, or together with the teeth, and gums, loaded with a black offensive sordes.

The sense of taste was sometimes obtunded or absent.

Chills ocasionally announced the onset particularly of milder cases, in rare instances they were repeated, they aided much in forming a prognosis of the event, where sensation was so much obtunded from the first, that chills did not form, much was to be apprehended.

The skin presented great varieties, I have

have seen it steadily above the natural standard for an unusual lenght of time, much beyond what happens in ordinary fevers, but in such cases I have remarked that a remission having once taken place is seldom followed by this sign of febrile exacerbation. in other cases the skin has preserved a equable temperature, and remaining soft, moist, and perfectly natural, when not the less danger was manifest. but commonly it was otherwise, the head or breast, or both, having a febrile warmth, whilst the extremities were cold, shrivelled, and clammy.

A numbness, with a dull pain sometimes affected the skin, and muscles, of a part, especially the extremities, these symptoms were not always quite removed, until after every other function was restored. A general torpor, and entire insensibility of the skin, occurred in some of the most malignant cases. I have known it amongst those delusive ap=

appearances, where there was so much muscular power remaining, that the patient continued to rise from bed to the last.

The skin in most cases became yellow, differing greatly in the intensity of the colour, the rapidity with which it was affected, and the period when it occurred, but perhaps more frequently occurring, about the third day.

In mild forms of the disease, the skin becoming suddenly yellow, denoted an unfavourable change. It occurred in two cases so mild, that no serious apprehension was entertained as to the result. The one became suddenly yellow on the eighth, and died on the ninth day, the other on the twelfth, and died three days afterwards.

At this time a transfer of disease took place from the liver to the stomach, as was evident both from the symptoms, and dissections. In the first, the stomach

stomach was found highly inflamed, singularly corrugated, and contracted, and filled with black vomit; the other was also somewhat inflamed.

When not yellow, the skin was often of a dusky, leaden hue, or bronze, or shining, or on the forehead only, was seen a shining, metalic lustre, with a mahogany die in the neck, In those becoming yellow, the change was first seen in the neck.

The serum discharged from the blisters, was frequently yellow as saffron, the urine was coloured, and the perspiration would give a yellow tinge, to a white sheet, or handkerchief.

It pervaded the fat, the cellular tissue, the periosteum, and even in the ventricles of the brain, I have seen water of the lightest yellow.

The feces, often considerable in quantity, were mostly of a dark brown, or black, or tinged with bile, or clayey, or were occasionally of

of cream colour, which may be attributed to the regurgitation, and incessant vomiting of bile, and in other cases to the suffocation, or paralysis, of the liver, and consequent suspension of the secretion of bile.

The feces were not unfrequently so acrid, as to produce great distress in the bowels, and to excoriate the rectum, and parts without the anus.

In a patient who had suffered much, & perhaps died from this cause, a matter which was chiefly a dark, thin bile, having a sediment resembling gunpowder, was found in his stomach, and intestines, and gall bladder, wherever it was found, except in the gallbladder, there were traces of inflammation, evidently caused by the action of this disordered secretion.

When long retained the feces were intolerably fœtid, and I have remarked a stench, resembling that from putrid meat.

meat. I fancied it to proceed from a partial putrefaction, taking place of digestion, the digestive process being altogether suspended.

Costiveness in the early stage, was a prevailing symptom, and when very unyielding, gave an unfavourable prognosis, but this was not uniform, there were cases which commenced with a diarrhœa, and even with tormina tenesmus, and bloody stools.

In one of these, a middle-aged black man, this symptom was changed to the gastric form of the fever, for some days his life was despaired of, at lenght he seemed to recover, and rose from his bed, when there came a great discharge, of dark, thin, flaky matter, by stool, resembling the black vomit, after which he fainted, and expired. His stomach, with a mere blush of inflammation, was found to contain a similar matter.

A Bilious diarrhœa, spontaneously

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supervening, was always followed by a speedy convalescence.

Bilious vomiting ushered in, and sometimes accompanied the successive stages, of the milder cases, though the more malignant, were altogether exempt from it. It was sometimes so acrid, as to produce a burning, and soreness, of the throat and fauces. It varied much in quantity, and has been so dark as to be mistaken for black vomit.

A Bilious vomit, coming on at an advanced period, in cases previously free from it, was a most auspicious omen.

The urine was most remarkable for its deficiency, especially in cases threatened with danger. In other respects it observed many unimportant variations. In one instance it was believed that there was none discharged during three days when the patient died, about a large spoonful of yellow serous

fluid, was found in the bladder, the coats of this viscus were thickened, corrugated, and inflamed. Excepting a deep injection of the vessels of the pia mater, there was discovered no other evidence of disease.

A total want of urine, may be considered amongst the very worst symptoms. but not less so was Sullicidium Urinæ which I believe occurred only in fatal cases.

A very free evacuation, in the natural way, of urine, was at the same time auspicious, or favorable.

Fainting, which introduced the disease in some instances, was more common to the first, than to the future stages, to the first, than to the future bludings.

A Peculiar squinting, with a convulsive protrusion of the tongue, occurred in two coloured females, it was paroxysmal, continuing perhaps five minutes at a time. un-

increasingly. It was excited by any sudden noise, or stir of the bed cloths, or an effort to speak, it was accompanied by some delirium, great nervous irritability, and anxiety of mind, with some constriction of the chest, a hurried and difficult breathing, and a pulse frequent & irregular, it gave to the countenance a most ghastly aspect, ——— that could not be beheld without emotion. It yielded entirely to the loss of blood, which was general, and topical.

Muscular power, often observed a strange want of correspondence with other symptoms, and with itself. In some the most extreme prostration, almost amounting to paralysis, occurred, whilst others were much less affected, and some rose constantly from their beds, with a countenance haggard, and collapsed, the skin cold, the pulse almost imperceptible, disturbed by a delusive imagination and pursuing its object persisted obstinately all

all medical authority. Thus dying upon their feet, the could not be persuaded they were ill, and were sometimes so strong, and maniacal, that they could only be governed by the straight jacket.

A young female who had been six months confined in the cells, under treatment for Mania, was there attacked with a mild fever, of the same character of that of the prevailing disease, she became immediately rational recovered in about twelve days, and was discharged sane.

A young coloured woman, in the surgical department of the infirmary, having a deep, painful, phagedenic ulcer, on the thigh, which was not benefited by any treatment, but continued to enlarge for three months, she became suddenly maniacal, attempted acts of violence, and shouted furiously, to the great annoyance of the other patients,

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she was committed to the cells, where by an appropriate treatment, her mania left her in about three days, but was succeeded by tenderness of the epigastrium great prostration, and the more prominent symptoms of the prevailing fever, her eye was changed from a red, to a dusky yellow, the discharge from blisters, was also yellow, her tongue, and teeth, loaded with a black incrustation, she was dangerously low for about ten days, meantime her ulcer healed rapidly, and was with her fever perfectly cured in less than five weeks.

Mania also occurred during convalescence in five several cases it came on always at night, was not attended by fever, and yielded very kindly to treatment, as bleeding, an emetic, purging, cupping the head, blistering the back of the neck, and the extremities. Three days in a case of the most turbulent character, was its longest duration, it was twice excited by

ly too early indulgence in animal food, once by a draught of porter, & in other instances, I suspect it was owing to an error of diet.

A lad twelve years of age in a fit of mania sprang from bed and was caught in the act of leaping from the second story window he was immediately convulsed when a stream of dark matter issued from his mouth and he fell dead.

Petechiæ were not common, and only occurred when there had been a neglect of early treatment, they appeared in small, numerous dark blotches, chiefly on the arms, and breast.

A species of rash, that produced much itching, and was very evanescent, occurred in a few cases, and only in females, who had taken sick at a particular period. It gave greatrelief to the irritability of the stomach, when it disappeared the vomiting was renewed.

Coma occurring early especially

when there had been neither chills, nor pains, with a slow depressed pulse, vomiting, and cold sweats, portended great danger.

Subsultus tendinum, so common in Typhus, rarely occurred here. There were however sometimes tremors, and great nervous agitation, which has run into convulsions. I have once seen painful, tetanic constriction, of the muscles of the back of the neck, and of the spine, by which the head was thrown violently back, whenever the patient was disturbed.

Respiration was rarely affected, sometimes it was hurried, and oppressed, or deep sighs were uttered. Throwing back the head, and shoulders, forcibly to expand the chest, was always a fatal symptom. The heavy stator of typhus, which sometimes resembles that accompanying mechanical injuries inflicted on the brain, occurred in but two or three cases, except immediately preceding death.

Hiccough was amongst the unfavourable symptoms, it was often very distressing to the patient, but many recovered from it, and in one instance after it had continued three days.

No symptoms were more certainly fatal, than to see the patient tossing his arms, rolling his head, drawing up his legs, slipping constantly to the foot of the bed, and rolling off of it, with occasional sighs, and groans, as if from extreme bodily wretchedness.

The throat was in some instances so sore, as to render deglutition difficult, and painful. The one most troubled with this symptom, complained much of a tenacious, frothy secretion, which interfed sometimes with his respiration, he feared so much to swallow, on account of the pain it gave him, and the seeming danger of suffocation, that he would rather endure the most intolerable thirst, than make an effort to swallow.

On being persuaded to take some tea, he had like to have suffocated in the attempt, he was thrown back upon his bed, with violent spasms. In the ardour of his thirst, he seemed to look with extreme anxiety at the cup, but when it was presented, he recoiled from it, and being somewhat delirious, could not be persuaded to taste again, saying it would murder him, he died the following night.

The absence of natural modesty, indicated by exposure of the body with indifference, was amongst the bad signs.

Hæmorrhages from the nose, except they occurred early were amongst the fatal symptoms. Less frequently occurring though more fatal when from the gums, or the ears. The gums and lips were sometimes excoriated, yielding a bloody, offensive sanies. In some few instances, hæmorrhages occurred from blistered surfaces, from the bowels, and from the uterus.

Black vomit, occurred in those under my care but in ten, or twelve instances, differing remarkably in this respect, from the fever which in other locations, was attended in so many of its fatal cases, with black vomit. Though, there was a manifest tendency to it, in many cases, as I judged from the appearance of a vomit having a greyish, flaky sediment, which sometimes approached a chocolate brown, it was often the forerunner of black vomit, and differed from it in little else than colour; like that secretion it was varied by admixtures with the common contents of the stomach, and sometimes with blood, and frequently a glareous, tenacious mucous, resembling that from other morbid conditions of the stomach, especially from mania potu, it was rarely mixed with bile though I have seen bile so black at the first efforts to vomit

at a stage so early, the stomach could not have taken on the condition essential to the formation of black vomit.

In the case of a middle aged Mulatto there was a gastritis suddenly induced by drinking cold water, he was admitted amongst the few patients, from which he had no symptom different, ~~different~~ except more than usual tenderness of the abdomen, on account of which he could not endure any change of position.

There was an entire prostration of strength, and for the space of one week, his life was in extreme jeopardy. At one time a flaky coffee ground matter hardly darker than a chocolate brown, having streaks of mucous, floating through it, was thrown up. I thought it unequivocally black vomit. the patient notwithstanding recovered.

A complete remission of symptoms sometimes occurred, but was always a fearful omen.

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In one instance it was so remarkable, that the patient imagining himself well, slipped out unperceived, and walked a number of squares to his home, where when perceiving some head-ache, he immediately returned, a change was soon apparent. on the second day he died.

Morbid vigilance was a pretty common trait, in this disease, tho. the reverse in a few instances obtained. In one the entire absence of sleep. for seven days, (the whole term of his illness) the peculiar expression of countenance, and when pressed upon, a tenderness of the epigastrium, formed the only determinate symptoms.

His spirits were good, his strength but little impaired, he was never heard to complain, thus he remained and there was so little change perceptible, that his being under medical treatment, was a mystery to his nurse until the fifth day, when that was evidently

a general sinking of the powers, his countenance becoming haggard, his eye retiring within its socket, his pulse weak, and his gait tottering. But still he arose from his bed, when he would never remain long, he would at no time acknowledge himself ill, and daily repeated the request to be discharged.

With the greatest simplicity he would chat, and jest the sick around him. On the seventh day upon entering his room, I found him reclining upon his bed, he instantly arose, and with a smile bade me good morning, and desired with some earnestness to be discharged; but whilst speaking, his voice faultered, I saw his countenance change, his eye became fixed, and he fell instantly dead.

Many are the scenes which touch the sympathies of a physician's heart, but at no time is he more sensitive than when

when he sees a fellow being, gliding swiftly unconscious into his grave, while his friends around him are equally unconscious of his danger.

In a disease like the present where the countenance is to the inexperienced so deceptive, yet to the eye of an observing physician, so faithful an index, the importance of studying it well cannot be too strongly inculcated.

It is by patient watching at the bedside only, that that intimacy with the physiognomy, can be acquired, which distinguishes the eye of a discriminating physician.

Associated with different degrees of danger, the countenance was seen calm and serene, or listless, or vacant, looking as if without seeing, or gazing careless upon space with the perpetual smile, and unconsciousness of idiocy, or with the simplicity of a child, diverted with the glitter of a feather,

or thaw, splinted and magnified by his perverted imagination, or rapt with the pleasing hallucinations of fancy, or distorted with fear at the horrid spectre his imagination has conjured up, or silently weeping, with an expression of grief, or gazing with an indeterminate suspicion, on those around him, repeatedly inquiring who are those he should best know, what they desire, or with what motive they do things observed by him, or a malignant, scowl mantled ~~the mantled~~ the brow, or the fixed sullenness of despair, or the gay volubility, with which the naturally taciturn sometimes surprise us.

These marked the variety of manner which were amongst the most conclusive symptoms.

The stomach from the first always shewed some signs of distress, was afflicted with a burning, and a gnawing sen-

sensation, was very irritable, and threw up its contents. at first frequently of a bilious character, but ceasing to be so as tenderness, or inflammation appeared in the stomach.

Tenderness of the epigastrium, the most uniform symptom, in cases of the higher grade, was occasionally absent, and did not appear to be a necessary accompaniment, to the Gastric disease, for dissection has shown the stomach highly inflamed, and containing black vomit, when there had been no sign of tenderness.

The pulse was generally full, and frequent, having some force; but was occasionally labouring, and oppressed from the first, it had however no marked observances, in the progression disease, but as the case may be, presented all the varieties, which any where occurred, but there were three conditions,

of the pulse, which so far as I have observed, marked equal degrees of danger, first, the gaseous, or soap bubble pulse, by its volume and activity, entitling great force, though almost obliterated by a breath of air.

Secondly, the pulse thought to impart the sensation of a shattered quill, the artery seems to have collapsed, fallen in to folds, through which the blood seems to flow, as if through a bundle of tubes, this pulse was as compressible as the gaseous, and but twice occurred in fatal cases.

Thirdly the pulse hardly perceptible, or quite absent from the wrist, whilst the heart, the carotids, and even the temporal arteries beat strongly.

Many times the pulse was absent from the wrists, many hours before death, and I have known the pulse to be absent from the wrist, whilst the patient was in

in the full possession of every other faculty, and sense, except memory, whose operations ceased to act altogether, it occurred again in a black woman, not long after she was quite recovered from the obstetric department, and before she was apprised by any monitor of her danger, her peculiar countenance having led me to make the examination, for at this time her mind and manner exhibit an ichotic gaiety, she was persuaded to get to bed and though no argument was made use of she made no opposition when in bed, her pulse immediately rose, but was slow, hobbling, and irregular, again on the evening of the third day, the pulse was gone, she died before morning.

The pulse was said by some practitioners to be deceptive, and to merit no consideration in the treatment. I am notwithstanding most confident, that the physician who is

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is sufficiently observant of the various associations, which attend the several conditions of the pulse, and marks the influences of the treatment, cannot go wrong at its suggestion. In such portent diseases there may be no guide so infallible, as at all times unaided, to determine the mind of the physician, he acts on the collected evidence of the case, yet in time of danger, the pulse is never to be approached but with deep solicitude. Distrustful or ignorant of the pulse, how are the energies of the physician paralyzed, his knowledge from one entrance quite shut out), that ineffable look, which regards him as the last, the only hope, darkens in despair at his cruel inertitude, and inaction.

Disease may sometimes so smother the perceptions, and lurk through the system in such insidious guise, that the subject is not sensible of harm, when most threatened with

with danger. But the Physician, if an acute observer, and familiar with the expression of disease, will detect that in the countenance, and intellectual movements, which escapes the perceptions of all others. These lurking symptoms were to a certain extent, characteristic of this disease.

The evidences of critical periods, multiplying as the disease advanced, compelled me, (once prejudiced to the contrary) to acknowledge their influence. Those clearly marked were the third fifth seventh and ninth days to which I am constrained by irresistable evidence, to add the first 24 hours. It was very remarkable, that whilst many deaths occurred on the third day, not only in the public infirmary, but in the private practice of the city, and some on or about the expiration of the first 24 hours, I heard of none occurring at any intervening period. There was very evidently a disposition to a solution of the fever at the ephemeral period, which, with the

the cooperation of an appropriate treatment, brought many cases ominous in their origin, to an early crisis, and destroyed them in the germ.

In obedience to this law, many cases spent their force, and spontaneously subsided, having but the existence of day.

Content to submit these views to the test of a more enlarged experience. I shall not urge them by any tedious details, though I should certainly be slow to surrender the ground, which is maintained by the lights of analogy, and my own experience.

Its cases from which similar deductions may be drawn, are constantly occurring. I should have been less tenacious of these points but that there are those not wanting in reputation, who believe the precise duration of all fevers to be defined by their own specific nature, from their origin. Such an opinion, has given sanction to delays, fatal as those which refuse to extinguish the kindling

flame, until the mastly element, could defy all human skill.

Properly defined, what was the disease of which we are treating? On this point, there existed a great diversity of opinion. Manifesting great differences of force it may for the present be considered a highly inflammatory Bilious fever. in some instances putting on symptoms common to Typhus, in other imitating the malignant Yellow fever. But to this question, I shall presently reply more at large.

Doctor Rush during his whole life strenuously maintained, that the yellow fever, is but an aggravated form of bilious fever.

Doctor Physick, on the contrary, has from my numerous dissections concluded, that the yellow fever is located in the stomach,

and much experience, has since contributed to prove his position just.

As this is a point on which there is yet some hesitation, I will offer for consideration what has occurred to me at the bed side, bringing with it the evidence of dissections.

Each organ has its own appropriate function, its own appropriate stimulus, and its peculiar susceptibility to the action of particular medicines. But whilst particular medicines, on this account, constantly tend to a sameness of effect, there are circumstances, at all times occurring, to modify that effect. The same obtains in the action of morbific poisons, hence it is that the same poison, produces in one instance the distinct, in the other the confluent small pox. We have a remarkable illustration of this fact, in the scarlet fever, however unlike its different forms may be in symptoms, general character, location, and

degree of danger; all its varieties, originate in the same specific poison, and when properly distinguished into classes, as the scarlatina simplex, the anginosa, and the maligna, all now acknowledged to be the same specific disease.

That diversity of effects cannot result from identity of cause, is most certain.

But here we have in view one great cause, modified in its action, by a variety of circumstances more or less obvious. We know the quantity of poison taken, the mode of administering it, & the the particular circumstances of the person, at the time of taking it: all give variety to the effect. Thus the digitalis may prove an immediate poison, or may exert a gentle, or salutary influence on the system, or may slowly, unperceived accumulate its force, and after a time, surprise by sudden and alarming consequences. Calomel as may be the quantity taken, or the mode of

of administering it, may act only on the primæ via, or may pass on until received by the salivary organs, they are stimulated to a powerful and peculiar action, or without observing any local attachment, may signalise its presence by powerfully subverting morbid actions, going on in the system.

This view premised, there is less difficulty in comprehending the causes, of all that variety of form, presented in the epidemic of 1820.

Like mercury, when slowly introduced into the system, the morbific miasm, acts on that organ, which is particularly sensible of its presence, whilst the one acts on the salivary organs, the other acts on the liver, and thus is produced a Bilious fever. But when presented in a more concentrated form we find the stomach participates in the effect, thus mercury, may salivate though it purges, the pestiferous miasm, may act simultaneously, on the liver

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on the liver, and stomach, producing a form of disease, which for want of sufficient refinement, has been hitherto without a name. Seeing it necessary to have it somehow distinguished, that whilst I speak of it, I may make myself intelligible, I will for the present take the liberty of calling it by that name, which would seem to me, the most appropriate, and natural. a

Gastro-bilious fever. The poison presented in the highest possible concentration, acts immediately, and powerfully, upon the stomach, and the liver, does not participate in the effect, and thus is produced, the Malignant, or Gastric fever.

But there is one other form equally distinct, and which very frequently occurred in the Sugar house, it is that intervening between the Bilious, and Gastro-bilious. It is that in which the liver is powerfully affected, whilst the stomach is merely irritable from the first impression of the poison, but is consequently easily provoked by any cause.

Hence it is greatly distressed by the perverted and acrid bile, which a diseased liver is constantly throwing into it. This provoked it sooner or later, more commonly about the third day inflames, thus it is clearly distinguished, from the Gastrobilious just mentioned, and as clearly from the Bilious.

This equally deserves a name, and without apology, I shall for my present purpose, call it a Biliogastric fever.

This is not imaginary what might happen. but an attempt to account for facts, for what I does happen.

The disease of the Sugar house, was principally made up of those two forms of fever, the Biliogastric, and the Gastrobilious.

These two forms, as I shall presently shew, result in the Gastric form. how this happens is easy of solution. The disease of the Stomach, in the one primarily, in the other

secondarily induced, by their greater force, their counter impression, relieve the liver, upon a principle which all must recognise. Just as a blister would relieve a pleurisy. But the disease secondarily Gastric, is a less virulent disease than that which from a greater force in the first cause, was orignally located in the stomach.

Thus in hand four diseases, the product of the same poison, in grade equidistant from each other, the highest and lowest grades so widely separate, that not even the outline of the features of the one, is retained in the other, no traces of family resemblance, can be recognised between them.

Though each class, is thus distinguished by its peculiar symptoms, and demands a peculiar treatment. they are so clearly linked together by the order of nature, that scientific harmony also requires, that they shall be arranged under one great head, in the following order.

Bilious fever.
Biliogastric fever.
Gastrobilious fever.
Gastric fever.

Of the diagnosis, and treatment, proper to each class. and first of the

Bilious fever.

This was an open and developed fever, was introduced by langour, chills, pains in the head, and back. &c. the face was flushed, the mind bewildered, the pulse was full, and strong, and frequent, the tongue was covered with a white fur, the skin was hot, dry, and harsh.

Tenderness of the epigastrium which was pathognomonic of the other forms, did not occur here in any instance, the Stomach soon sickened, and was relieved by copious vomiting of bile, but was less irritable than in the other forms. Differing from the other diseases, bile was occasionally ejected from the Stomach

at all periods of this disease.

Though rimdiable, and capable of being cut short by a proper effort, in the early stage. yet there was danger in neglecting the mildest form. I have seen two cases in which no serious apprehension was entertained, suddenly change at an advanced period, fix on the stomach, and surprise by a fatal issue.

A very copious bleeding, perhaps repeated, emetics, mercurial and other cathartics, the ordinary diaphoretics, pedelluvium, Sinapisms, the Subacid and diluent drinks, constituted all that was necessary in the treatment.

Biliogastric Fever.

This was distinguished, by greater aggravation of symptoms, but was particularly known by the

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the great irritability the very distressing sense of heat, and gnawing, which afflicted the stomach, and by the very frequent vomiting of bilious, and mucous matter, the bile though not greater in quantity than in the bilious fever, when thrown up it seemed more acrid, and offensive to the throat, fauces, and taste.

But a decisive symptom, of this form of the disease, was a tenderness of epigastrium, which always occurred here, and never in the bilious. It was distinguished from the Gastrobilious, by not having the tenderness at the epigastrium amongst its first symptoms, generally, this symptom did not occur until the third day. Partaking of varieties in this respect, it sometimes occurred at a much later period, as on the sixth, eighth, and even on the twelfth day in one instance.

It was also marked, by a uniform cessation of the discharge of bile, upon the occurrence of this tenderness, announcing a transition

from the liver to the stomach, which is henceforth destined to be the throne of the disease.

At first, there was no symptom to distinguish it positively from the bilious fever, but when I became familiar with the expression of the disease, for I was present with the patients five hours out of every twenty four. I found it possible, almost with certainty, to point out their several characters, from their earliest symptoms. The greater force of the Beliogastric, was immediately evident. usually it was introduced by an exhilaration of Spirits, a sense of fatigue, stiffness of the joints, vertigo, sometimes fainting, pains of the head and back, severe, and excruciating, lancinating thro, the forehead and eyeballs. The eye was red and fiery, or inflamed, or not visibly affected except in expression, there were high degrees of ~~degrees of~~ delirium, the pulse was quick, with some volume, and considerable force,

amounting in frequency to 120, 140, and I have known it 160 per minute, great frequency of pulse however was not a constant attendant upon this form of disease, The skin was harsh and extremely heated, and there was great anxiety from distress of the stomach, and frequent retching to vomit; relief obtained from vomiting was not so complete, and repetitions of the effort were more frequent, than in the bilious fever.

A formidable disease, in which I imagine the mere power of nature, would never effect a recovery, whilst from a bold, and well directed treatment, in the early stage, in a patient of temperate habits, success may always be anticipated.

There can be no doubt as to the propriety of commencing with the most copious blood letting, taking from fifteen to thirty ounces, or as much as the pulse will at all warrant, repeating the operation with a

a more gentle hand, as soon as some reaction is apparent, and again as the case may require. The demands of different cases will be found very various, I have taken fifty ounces in twenty four hours, and a hundred and twenty in less than three days. But rarely will this require to be imitated.

There is no anodyne so soothing, no impression so acknowledged by the system, no means so calculated to arrest the morbid tendencies, and keep alive the susceptibility to other agents.

Whilst on the other hand, timidity, or delay, gave time for the formation of morbid action; and organic lesions, bringing with it greater and more dangerous prostration, and followed by more tedious convalescence.

The stomach evincing great irritability from the first, was more disturbed by the

perverted secretion of bile, constantly thrown into it from the diseased liver, and would only be appeased by vomiting, to promote this was obviously proper. But in selecting the means great caution was necessary, lest they do mischief by increasing the irritability of the stomach, and by inducing incessant, and uncontrolable vomiting, or provoke the stomach to inflame, to which the disposition is so strong. Frequently it was sufficient to swallow large draughts of tepid water, or an emetic of ipecacuanha being given, the patient should be obliged to swallow as much as possible of warm water, or molasses and water, or some simple tea, by which means the effect is less violent, is sooner over and is more complete. The emetic thus quite washed out, gives no further distress to the patient. Thus relieved he is tolerably comfortable, until a further accumulation of bile, when vomiting will

be again proper. By the repetition of emetics at proper intervals, the disease has maintained its bilious character, whilst from the neglect of this plan the Stomach must inflame. When tenderness of the epigastrium has occurred, emetics do harm, and as the secretion of bile soon ceases they are less required, and the Stomach must be composed by other means.

The Bowels were more frequently constipated, the discharges dark, and offensive, or otherwise.

In the choice of cathartics, perhaps the mercurials answered best, there is something peculiar in calomel, which allows it to agree with an inflamed stomach. It was certainly retained, when all others would have been rejected. It tended sometimes to emulge the liver, to change its actions, and disposed to favorable crisis. I have seen in a few cases, a sudden accumulation of bile, follow the exhibition of calomel, which thrown up

up, was followed by a remission of fever. I am not sensible that a salivation, to which a number were subject, did any positive good, except when called for by the particular circumstances of the case. It seemed indeed to render convalescence more tedious. But it is worthy of remark, that a relapse occurred in no instance after a mercurial sore mouth. Copious purging with calomel, and other means did much good, carefully avoiding a diarrhoea, which if there is much debility is attended with danger.

In no case, could more confidence be reposed in the efficacy of a blister. Recollecting the local nature of the disease, the importance of the parts concerned, and the value of time, the blister should be early applied, and of adequate dimensions upon the seat of the disease. It greatly soothed irritability of the stomach, it charmed away much inquietude and restlessness. As it drew I have seen the countenance expand, and the patient composed to sleep,

It arrested the tendency to inflammation, and when inflammation did occur, the blister was the sine qua non. It was equally subversive of morbid action, whether going on in the liver, or the stomach.

It might be preceded by cups, or if time is very important, its drawing promoted by the application of mustard. or heated oil of turpentine. or tincture of cantharides. If after the first evacuations, no remission was had in the ardour of the fever, blisters to the extremities contributed much to break its remaining force. They frequently diffused a grateful moisture, over the surface, and did much to equalize excitement. But they are more particularly desirable on account of the tendency of action to introvert, to forsake the surface, as the disease advanced.

The many, and important advantages, derived from the external application of cold in this fever, give it a claim to a high rank, amongst the resources of the healing art. By reducing the

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the excessive stimulus of heat, and bringing on a perspiration, when applied to a dry and parched skin, the fullness of relief, and the grateful sensations it imparted, recommended it to the patient and the good it always did, in the cases to which it was adjudged proper, establish its safety, and utility.

Still I would never without consideration, commit to the directions of a nurse, a remedy so efficient, and whose ill-timed application, might be productive of so much mischief. It was applied, by frequently passing a sponge of cold water over the whole body. Sometimes exceedingly pleasurable sensations, were derived from merely sponging the breast, and temples, or feet, or allowing the patient to have a basin of cold water, in which to place his hands, or when a greater effect was desirable a sheet, all other covering removed, wrung out of cool water, was applied over the body. this was changed pro re, and regulated by the effect produced, especially by the patients feelings. care

carefully avoiding the production of cold, or chillness.

Having indulged the patient with this delightful remedy, as far as thought proper, he was replaced between dry covering, when he frequently brake out into an immediate perspiration. But not the least of the uses of the remedy, were in a local direction, as when the rage of morbid excitement, had accumulated upon some cardinal part, as the head, the stomach, and perhaps the liver, agitating by a strong commotion, the delicate web of the constitution, as far as its extensive sympathies are felt, cold cloths to the part, by dispersing the heat, and equalizing excitement, would sometimes give more immediate relief, than any other remedy. Whilst from some peculiarity of structure, or of action, an inflammation of the pleura, or lungs, is always aggravated by the application of cold, it was distinguished by unrivalled powers, when applied to certain conditions of the stomach in this disease.

To relieve the violent affections of the head.

which oftentimes occurred in that period of anxious suspense, when the flitting spark of life seemed hanging upon a breath, demanded the nicest calculations that could arise from much experience, and a just conception of the case.

There is a time, when we instinctively look to the lancet, as the chief of remedies, as being of itself equal to our most sanguine wishes, but after carrying its use to as great an extent as we may with safety, we are sometimes disappointed by the unyielding force of local attachments, that will continue to be displayed by the temporal pulse, violent pain, heat, and delirium, a sanguine eye, intolerance of light, and sound, and all the symptoms of phrenitis or congestion.

The most pleasing effects, may now be derived from the application of cold to the head, by means of thin cloths, dipped in pump water, and changed every five minutes, or ten. according to circumstances. or Ice water, or bladders of Ice. I have known

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in a phrenitis in this disease, a generation of heat so rapid, that the almost constant application of Ice for 30 hours, was only adequate to the comfort of the patient. The effect of cold water, may be increased, when Ice cannot be procured, by streams of cool air from a bellows. The immediate relief, derived from the mere shaving, and exposure of the scalp to cool air, has sometimes been a matter of surprise. I have been compelled to attribute to this operation, greater merit than was due to the influence of cold alone. To cooperate with the repellent power of cold it will now and then be an important measure to establish a revulsion, by means of warm and stimulant applications, to the extremities. The principle on which powers so diametrically opposed, conspire to a sameness of effect, that is to equalize excitement, is sufficiently obvious.

It is not unworthy of remark, that cold water in whatever way applied, was diuretic, but most so when injected into the bowels, occasion-

occasionally a very comforting application of the remedy. Position of the head has too much influence to be neglected, some elevation will for the most part, be found of great advantage.

In the choice of Diaphoretics, the condition of the stomach is to be recollected.

There are cases in which those which dispose to vomiting are obviously improper. When this is not to be feared, the stimulating sudorific, was a neat and useful medicine. or the Dovers, or Nitrous powders, or the spiritus Mindereri, or the effervescing mixture, the Balm, the chamomile, and Eupatorium, & Serpentaria, &c, might all find a place. But to deluge the stomach with medicines, can scarcely be useful, In this disease, nothing should be given without consideration. For the promotion of diaphoresis, it is sometimes necessary to depend upon other means, than those addressed to the stomach.

When the heat of the skin is ardent, with great

great restlessness, and inability to sleep, nothing could be so extremely grateful, and soothing, to the patient, as exposure to cool air, or sponging the whole surface, with cold water. Sometimes the vapour bath, might have a preference. Such means, were amongst the best diaphoretics.

To allay thirst, cold water, carbonated waters, balm tea, apple water, lemon, tamarind, and other acidulous drinks, answered very well.

Occasionally there was excessive thirst, accompanied by a painful dryness of the tongue & fauces, which found great relief in frequent minute portions of calomel, as the fourth or eighth of a grain every half hour, for six or eight hours.

To allay vomiting, amongst the best means were the effervescing mixture, lime water and milk, oil of turpentine, of cloves, and of amber, an opiate injection, a few grains of sugar of lead, or the insertion of a large pill of opium into the rectum, has succeeded when all the ordi

ordinary means, addressed to the stomach, have failed. And I have known the tela aranei to compose the stomach, when other means were insufficient. If action is pretty high, bleeding is useful, or cups to the chest, or fomentations, to the abdomen, spiced brandy, or mustard, or turpentine, or a blister, and in certain cases, attended with great pain, and a sense of heat in the bowels, the most signal relief, was derived, from a fold of cold cloths, to the abdomen, and I have seen it arrested by bathing the feet in warm water, and applying to them, hot bricks, or mustard.

In many of the cases detailed, but especially, when the rush of blood to the head, resulted in mania, coma, convulsions, and apoplexy.

The application of cups to the head, should not be delayed, together with the abstraction of the stimulus of blood, the external irritation which they add, is not of inconsiderable advan=

advantage. It is greatly in favour of cupping, that in many of the violent affections of the head, which may be accompanied by a languid, or oppressed circulation, some ounces of blood, may be taken with advantage by cupping, when the smallest quantity, taken quickly from the arm, would make an injurious impression on the system. To explain this, we may refer to an axiom in another place laid down, that in inflammation of any of the great viscera, accompanied by an oppressed circulation, blood may be taken with advantage or the reverse, the result depending altogether, on the manner of the operation.

But there are circumstances which preclude altogether the use of cups, which notwithstanding demand the application of cold, or of a blister, and many cases in which the joint cooperation of cupping, cold, and blistering, in the order here enumerated, may be required.

When the affection of the head was evidently but symptomatic, of the affection of the stomach,

Blisters did more good when applied to the extremities, than to the head. I have frequently remarked in mania potu, that a blister on the legs, or in perfuvia over the stomach, does more to quiet the turbulence of mania, than when applied to the head, or neck.

But there has happened in mania potu, and frequently in this disease, such a true phrenitis, that a blister to confer essential benefit, must be applied over the scalp.

Hiccough, was often very embarrassing. I have seen it in one case, almost incessant for three days, when it was immediately relieved, by a pill of the tela aranei. It was afterwards repeatedly given with the same view and was found to be the best means in our possession, for this purpose.

To compose inquietude, and delirium, the tela aranei, was sometimes found to act like a charm, in cases to which opium was not suited. From what I had seen of the effects of this medicine,

I was induced to give it, to correct the unpleasant consequences, which resulted from an opiate injection, in a case in which some old, and inspissated laudanum, had been incautiously used. It acted like a charm.

The free admission of air, was at all times of the highest importance. When in consequence of a violent rain, the windows were closed for an hour, a change was perceptible in the whole face of the ward; in whatever condition, or stage of the disease, all equally suffered.

It was found necessary to keep all the windows quite open, day and night. When they were closed, or little air stirring, the vapour arising from the sick, had sometimes a peculiar Soporific effect, on those in attendance, of which I was myself particularly sensible. It once caused me to faint. Every considerable change of weather, produced some effect on the tendencies of the disease. It was sometimes found

necessary to enjoin the strictest observance of silence, especially to suppress observations calculated to convey fears, as to the result, to conceal the deep solicitude which may become too intelligible upon the countenance, to exclude the light, when happily sleep may be induced thereby, or by admitting the light, to chase away the phantom which disturbs the imagination, and to bear a care of many incidental sources of excitement, which in health would make no impression. It is by a careful observance of these things, that our highest purposes are accomplished, as the following case will sufficiently illustrate.

An interesting young lady whom I was called to attend, fell a victim to the extravagance of a Mother's passionate fondness, who when life was suspended by a delicate thread, hung over her, and wept aloud, until her child filled with alarms, and sympathising in all the grief, and agitation of her distracted Mother, and worked up to the highest pitch of delirious excitement,

convulsed and exhausted, died.

Before parting with the disease treated of under this head, I will take the opportunity of introducing an interesting case, though conscious it might have been better located.

A young man, who came under my notice, was said to have a stroke of the sun, brought on by exposure to fatigue, in a very hot day, upon the wharf, below the City, he lay himself down without having complained, and was soon afterwards, found to be in a very heavy sleep, from which he could hardly be awoke, by any means, his muscular power was but little diminished, but all sensation and consciousness, appeared to be extinct. Without speech, or motion, he would stand or lie, wherever placed; his eye was of a dusky yellow, cast down, and suffused with tears, a fixed sadness was on his countenance, his tongue covered with a delicate white fur, his skin natural, his pulse slow, regular, and soft.

I directed an emetic, but could not procure an operation, until he lost blood, when an unusual quantity of dark bile, was thrown up; a mercurial purge, now brought away copious, dark, and offensive stools, by the next day, the case was more intelligible, there was no a great return of sensibility, he sighed, & rolled, called for drink, and was heard to exclaim his stomach was on fire; his skin, and tongue was dry and heated; his pulse at the wrist, more full & frequent, and the temporal arteries throbbed forcibly. He was cured by mercurial purges, the loss of eighty ounces of blood, a large blister over the stomach, and cold applications to the head.

The case is interesting, and open to the inferences that practical minds may draw from it, does it shew any connexion between the Sotus Solis, and the Bilious fever? It is at least curious to trace the movements of disease. thus leaving its retreat in the brain, and throw-

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throwing off its disguise, as soon as the natural operations of the stomach, and the vibratility of the system is restored.

Great care was necessary when reaction took place, rightly to graduate the quantity of stimuli, to the accumulation of excitability, for in convalescence, weak porter and water, and the lighter vegetable tonics, have provoked a fever. In early convalescence animal food was eagerly desired, and always did harm: remonstrances alone were insufficient to restrain the temptations of appetite. The food most innocuous, and chiefly relied on, consisted of panada, tapioca, boiled rice, bread and milk, potatoes, oysters, eggs, light soups, with a variety of ripe fruits. Mellons were innocent, and very grateful, and being plentiful, were freely indulged in.

To avoid the tedium of detail, and of elaborate views, I have been obliged to reject much, of what I had thought interesting,

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and I fear I have already trespassed, on the ordinary limits of an inaugural essay. Much of what has been said in a general way, under this head, will equally apply to the

Gastrobilious Fever.

This disease, ~~disease~~ was easily distinguished from the inferior classes, by the tenderness of the epigastrium being amongst the first of the symptoms, also by the sense of heat in the stomach, and anxiety about the præcordia, and also by the absence of bile after the first day. Bile was indeed rarely seen, after the first paroxysm of vomiting.

All the sympathies of life, seemed to be engaged from the first, the eye was watery, or red, and was finally converted into a muddy yellow, the complexion was natural, or leaden, or bronze, or of a mahogany die, or became icteric.

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or tranquil and serene, or exhibited a peculiar intoxication, or idiocy, or silent grief, or a malignant frown, or betrayed the utmost anxiety & terror. But however varied, there was that about it, by which it could hardly be mistaken, by those having constant intercourse with them.

The pulse was never hard, but was full and active, or small and extremely frequent, or hobbling and oppressed. It was remarkable, that the patient was sometimes sensible only, of an increased heat in the stomach, until pressed upon by the hand of the physician, when he instantly cried out from extreme tenderness.

There was a great collapse of the system, every power seemed to faulter under the weight of disease, the mind partook the conflict, it was sunk into fatuity, or exhibited alternations of depression and exhilaration, or wild in delirium, or irritable, and greatly agitated with consciousness of danger, indescribably,

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incurably wretched, he sought relief in change of position, and of attitude, rolled, sighed deeply, and occasionally uttered inarticulate complaints. There was a universal prostration of muscular power, or a paralysis of the extremities, or no perceptible change in this respect, till the last. Sometimes there was a soreness of the throat, and with or without it, a difficulty of deglutition. There were eructations of wind, and without a natural effort to vomit, the mouth was occasionally filled with the contents of the stomach. The abdomen became tense, and tumid. There were involuntary discharges, of dark, thin feces, and of urine, & hæmorrhages, from the patulous mouths, of some of the extreme vessels. There was finally a sudden sinking, or convulsions ended the scene

Subject to many varieties in this respect, the disease sometimes advanced many hours,

hours without any Pyrexia. the skin at lenght acquired a febrile temperature, or became exceedingly ardent, the pulse increased in frequency, and volume.

The exacerbation was kept up without remission, a much longer period, than ever happens in the autumnal, Bilious fevers of our country, and having once subsided, there was commonly no return of it, unless the disease was broken, or convalescence dawning. The remissions that were marked, were indistinct, and hardly observable.

If a continued fever can have an existence this was truly entitled to that character.

Again, whilst in the Bilious Remittent, convalescence is proverbially tedious, and the liability to relapse, greater than happens in any other fever, here the convalescence was as singularly rapid, and complete. From the comparative paucity of relapses, I am clearly

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clearly of opinion, that a partial protection at least, has afforded the system, against future attacks. whilst in the common autumnal Bilious, the susceptibility is increased.

A very satisfactory opportunity of testing these views, was afforded me, by comparing them with what occurred in more than 200. cases of bilious, and intermitting fevers, which in the subsequent summer, were brought to the same institution.

How the milder cases, of the Endemic of which I am treating, could have been of bilious form, and yet retain the relationship, to the malignant gastric fever, unimpaired, has been sufficiently explained on another page.

I am only tenacious of facts, my particular views, I am willing to submit to the test of future experience, and here I will take the opportunity of remarking, that in every division of this endemic fever, the diagnosis, sufficiently

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sufficiently distinguished it, from the Autumnal fevers, common to our Country. This disease was marked by the variety of its form, the strange, anomalies of which it occasionally partook.

Here the prowess of medicine, is fairly tested, but if called early to the Combat, it may in a great majority of cases, come off victorious, yet to expect uniformity of success, even under the most favourable circumstances, is to be disappointed, for there are cases, quite out of the compass of remedial power.

Entering upon the treatment with great circumspection, we find that here, unlike the biliogastric, emetics are contra-indicated. So tender and irritable, the Stomach will not endure with impunity, the violence inflicted by vomiting. To compose it when provoked, has called into requisition every effort of judgement, every resource of the art. Evacuations were not the less demanded, Costiveness was here more uniform, and more obstinate, than in other cases, various cathartics answered very well, but perhaps none

better than calomel in large doses, or frequently given, aided by laxative enemata, and if so much should be required, a drachm of Calomel, may be taken with perfect safety.

To decide on the use of the lancet, required the exercise of a wiser discrimination. In perhaps a majority of cases, there could exist but little doubt as to its propriety, whilst others, were said to be typhoid from the commencement, and the lancet was laid aside. To the propriety of calling this a typhoid disease, I think it right to object. In what it resembles Typhus fever, I am unable to perceive. They differ in their nature, location, and symptoms.

The pulse was indeed weak at the wrist, but the blood was thrown upon the heart, and large arteries.

That the circulation may be introverted unequally distributed is certain. I have seen the heart palpitate, the carotids beat strongly, and a considerable force in the temporal arteries, whilst from the wrist, the pulse was absent, or hardly perceived. Such instances

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were frequent in this disease. In all cases of inflammation of the abdominal viscera, especially of the stomach, and intestines, the same thing obtains to a certain extent. To relieve this condition, the local inflammation must be relieved, to do which, no means are so effectual as bloodletting. The circulation is not exhausted, but oppressed. Notwithstanding, the lancet is a dangerous weapon, in unpractised hands, blood should be very slowly detracted, the quantity at first small, the effect cautiously observed, the orifice closed, when the pulse begins to fail.

Then the limbs may be bathed in warm water, or brandy, or briskly rubbed in any stimulating embrocation, or sinapisms, may be applied, and some warm drink taken. These means properly applied, will soon have the effect, of inviting again a flow of blood to the extremities, which perceived, the vein may be immediately opened, with the same caution as before. By such means only, can an equilibrium of the circulation be established,

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I have seen these means followed by a strong and powerful reaction, as was indicated by a glow of warmth, and moisture, that suffused the surface, and by the blush on the cheek.

A young man, a stranger, having arrived in this city from Baltimore, remained three days upon the wharf, when he was taken ill. Seen on the second day, his case was of the kind before me, there was some tension, and tenderness of the abdomen. Such prostration of power, and of sensibility, with a small, creeping pulse, that loss of blood, was by others, deemed improper. Trusting to the lessons of experience, in the face of opposing fears, a vein was opened, and four or five ounces, being all that could be lost with safety, were taken, it was now evening, the bandage got off his arm in the night, and he bled it was supposed, more than twenty ounces into the bed, and was in the morning still bleeding guttatim. Though extremely weak, he expressed the greatest relief, and his

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mind was less confused, his pulse rose in the afternoon, and being followed by headache, and some heat of skin, and a flushed face, he was bled again, about six ounces, he rapidly recovered.

A case whilst it records what I felt in my own person, may not be obtrusive in this place, as it well illustrates the propriety of the measures, which I am about to recommend.

I was at one time sensible of an unusual degree of heaviness, and soporific effect, from the halitus arising from the sick rooms, a yellowness was observed in my eyes, and I felt a dull pain in my right side, which continued for some days, until the effect being probaly increased, by a visit which I had ocasion to make to the infected district, one morning, a violent cramp seized the muscles of my legs, in the evening of the same day, my system being impregnated with the miasmata, I fainted whilst in the act of prescribing, I immediately retired to bed, and slept, but

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soon a wretchedness the most indescribable came over me, depriving me of all conception of what, and where, I was. when suddenly, the light of the moon, presenting objects in my chamber in their natural appearance, I found myself out of bed, and seated, my head, clasped in both hands, was affected with a pain of the most fierce, and lacerating kind, a high fever accompanied, with difficulty I could compose my senses. I resolved instantly on opening a vein, as the blood flowed, the pain began to remit, and vanish, my bewildered imagination became collected, I felt reluctant to check a stream, which flowed but to relieve, having suffered the loss of about thirty ounces of blood, my stomach sickened, I took an emetic of calomel and ipecacuanha, and was relieved of an immense quantity of bile, I now slept, and perspired profusely until morning, and felt no other inconvenience, than a temporary relaxation. Thus a serpent is slain, by crushing its head.

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To multiply examples, to prove the superiority of bloodletting, over all other remedies, would be in this place unnecessary, but there are some amongst us, upborne by a spurious reputation, whose timidity or prejudices, founded mostly on some luckless misapplication of the remedy, dispute its high claims, and with specious pretensions, seduce the ignorant into a blind assent to their error.

A young Physician of this city, called to see a coloured man, in an advanced stage of the fever, invited me to accompany him, we found the patient suffering symptoms of very great prostration. the insensibility, and cadaverous feel of the skin, the sunken expression of countenance, the collapse of mind, and his pulse of the full regular, but gaseous kind, all sufficiently indicated his extreme danger, and the course to be pursued. My friend deceived by the mimick force of the pulse, would have him bled. I urged my objections against it in

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in pain, and left him, he performed the operation, and in three hours, came to let me know his patient was dead.

Some good should have resulted from a lesson so serious, but the Doctor in a panic at what he had done, hastily took up the opinion no less fatal in its consequences, that in the prevailing epidemic, the lancet should be altogether laid aside.

With a nice perception of the pulse, and a mind to perceive, and weigh the circumstances of the case, it cannot be difficult to do right. When a physician thus raises an indiscriminate hue and cry, against the lancet, his judgement is to be suspected, and it is reasonable to presume, that in his hands at least, the lancet is indeed a dangerous remedy.

A case of the most ardent fever, which came to my knowledge, in which there was a distracting pain of the head, with a burning

heat, and extreme tenderness of the stomach, from which the sufferer rolled, and groaned, and sometimes in an agony was thrown out of bed, upon the floor, he was denied the lancet, and I need hardly add died.

Subsequently a lady taken ill with a fever, not inferior in malignacy, she had when I saw her a flushed, tumid countenance, strong pulsation of the temporal arteries, a very frequent pulse, with some force, incessant retchings to vomit, and exacerbations which were accompanied with convulsions. It was alleged by the physician to whose care she was committed, that bleeding would throw her into a typhus, the one and only remedy, in which there was reason to hope being withheld, she fell into a worse than typhus, and died.

I was informed of the case of young man, in whose fever every sympton called for the lancet, the case nearly resembling those

just described, he was told by his physician that in the prevailing disease, it was extremely improper to bleed, and that in his case the loss of an ounce of blood might be very injurious.

But happily nature is not always destitute of resources, when the signals which she holds out for succour, bring no relief from art.

In the night the blood burst in streams from his nose, and bled almost two quarts ere it could be restrained, he now rapidly recovered.

The timely imployment of the lancet, would have done equal good, without the danger of the hæmorrhage. When the excitability of the circulating power is morbidly increased, the stimulus by which it is moved, should be proportionably withdrawn, or there will follow such an expenditure as to threaten life.

Whilst in its more common effects, blood-letting relieved the stomach of heat, and irritability, and delayed vomiting. In a few instances

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I have remarked a copious bilious vomiting, very soon to follow the loss of blood, where little or no bile had appeared in the previous vomitings, this was always a salutary effect, to account for it, we may suppose the liver to have its operation suspended from the disproportion between the powers of the organ and the excessive stimulus of blood with which it is oppressed, but when relieved of its load, the liver immediately resumes its office, and perhaps for a time surpasses the effect of a healthy, or uninterrupted secretion.

Thus the oppressed slave, sinks beneath the burthen to which his strenght is unequal, and strives in vain to rise. until a portion of it is removed. We may refer to the same principle, the procuring an immediate perspiration by bloodletting, where all the stimulating means previously resorted to, not only failed of the effect, but added to the distresses of the system.

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the matter acted on, to the vital energy, that we may account for the rise, of an oppressed pulse after bloodletting. I have frequently observed an immediate evacuation of the bowels, to follow the operation of bloodletting, and more than once this has happened, when costiveness had previously resisted the usual means with obstinacy.

Anasarcous swellings, Rheumatisms &c, which were amongst the sequela of this disease, were as often the consequence of neglected bloodletting.

Whatever disease previously occupied the system, if not entirely displaced, and extinguished, by the greater force of this disease, it was not allowed to slumber, but aroused to greater activity by a new, and powerful impulse, it entered the vortex, whelming, extending its ravages. But I would attach some importance to the fact, that such effects were most conspicuous where venesection was neglected. Contrary to a very generally received opinion, constitution

rendered irritable from the continual vibrations of an old disorder, cæteris paribus, demand more especially the loss of blood.

A young woman of spare and delicate frame, having suffered more than four years, from a painful and corroding hepatic disease, became at this time violently ill, with fever, excited by great fatigue, and anxiety, from nursing her father in the same disease. She desired the physician then in attendance to bled her, he replied that she had not one drop of blood to spare, and also suggested, that as her sexual term was just then evincing itself, it would be improper to disturb the system, by the loss of blood. She came under my care, her symptoms were urgent, and pointed directly to the lancet, unwilling to wave a conviction, that rested on the unyielding lessons of experience, I drew twelve ounces of blood, when she fainted, a circumstance that awakened

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suspicions not easily quieted, such was the reaction, that in twelve hours I again opened the vein, and took twenty ounces more, when she expressed great relief. I afterwards found it necessary to bleed her twice more, but sparingly. As a defence, a blister was kept discharging from her weak side, during her illness, she recovered very speedily, and she has not since suffered from her hepatic affection.

Contending against an insidious foe, confidence of success, is reposed not more in the strong, than skilful arm, the vigorous onset, than the judicious retreat. There are many cautions that must direct, and stay the hand of the phisician, but which have been in other places, sufficiently inculcated. I will here give it as an axiom, that in inflammation of any of the great viscera, (which is for the most part accompanied by a depressed pulse) blood may be removed with advantage, by an ex-

experienced, and skilful hand, to such an amount as would have proved speedily fatal if incautiously taken.

Time must be allowed the system to repair the loss of the general circulation, which is effected by a retrocession from the engorged viscera, but as this cannot be quickly accomplished, if blood be too hastily drawn, the system will sink irrecoverably.

Before parting from this interesting subject, I have yet to make a remark upon that disordered circulation, which has often deceived the less discriminating and added to the doubts, as to the safety of the lancet, Contemplating the gaseous pulse in the strictest pathological view, I conceive it to be the natural effect of that expenditure of stimulability, and contractility, consequent to excessive action, One of the great and essential springs of vital action, having its vigour impaired and paralyzed withholds its agency, in propelling the blood onward, through the minuter ramifications of the

vessels, hence the arteries contain more than their due proportion of blood, and are dilated to their greatest dimensions, the impulse from the heart not seconded by the contraction of the smaller vessels, ~~but~~ communicates to the mass of blood, little more than an undulatory motion, which is lost in the elasticity of the vessel, or rebounds from the slightest touch of the finger. To preserve this feeble circulation, until reaction may take place, demands not only all the stimulus, that may be derived from the peculiar nature of the fluid, as blood, but even the stimulus of distension. At this critical emergency, nature destitute of resources stands at bay, the efforts of art, the most refined, and unremitting, may not always succeed. Should officious ignorance mislead by the deception bounding of the pulse, doom the patient to the loss of blood, the vessels collapse, and the sufferer dies.

In advocating the claims of bloodletting,

I hope to escape the charge, of a blind devotion to the remedy. I have been restricted within the compass, which my own convictions, and the obligations of duty prescribed, Less would have been a tribute, unworthy the means, by which our highest purposes are accomplished. by whose influence we have so often arrested the expiring sigh, and fanned it into life, by whose magic, pains the most racking, and intolerable, are forced to lose their hold, when no other power could move, or charm assuage, by which the red eye, the savage fierceness of countenance, and the wild distraction of mind, are lulled down to, the calm expression, of a more tame disorder.

I have witnessed features, distorted by the dissolving agonies, of an unequal conflict, or the horrors of a phrensied imagination, expand and composed to an oblivious, and refreshing sleep; or assume the tearful smile of thankfulness and hope, as the vital stream flow-

flowed from the arm. Shall I then turn from it with indifference, or hear it calumniated, and not feel indignant at its wrongs.

Stimulating applications externally, were more important in this, than in any other fever. It is to be recollected that the stomach is for a time incapacitated, its accustomed functions suspended. Every avenue through which stimulability is accessible, should be borne in mind.

Hence injections medicated, or nutritive, were particularly useful, that they do great good, my observation has entirely satisfied me, but to the skin, stimulating applications were doubly important. In this disease, patients often began to die at the surface. The feeble remains of life, hovering about the heart, kept up for a time, a partial existence, amidst the death of the capillaries. Sometimes the skin has become quite insensible, whilst to the feel it was warm, and natural, but this was a mere

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paralysis, or torpor, which was remediable. But when cold, or peculiarly cadaverous to the feel, or to the smell, I have marked it a fatal symptom. To divert such tendencies when they were obvious, frequent frictions with hot brandy, cayenne pepper & brandy, oil of turpentine, the oleum monardæ punctatæ, with sinapisms, or these aided by a warm bath, were commonly sufficient. But to arrest a nearer approach to death, when such means made no impression, I have succeeded by pouring on hot water, particularly on the extremities, upon the body it was less required, not scalding hot, but graduated to the remains of excitability. Though if a less degree of heat produced no sensation, it is obvious that harm could not result, from a boiling heat, hence the safety of the measure. Notwithstanding, great caution was necessary, in the adaptation of the remedy, never allowing a greater warmth

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than would produce some sensation, sensibility awakened, the effect should be carefully preserved by stimulant frictions, but what I have found to answer best, was the application of mustard, over at least one third of the surface, particularly on the extremities, but at all times preserving warmth by the application of heated bricks, bottles of warm water &c. If this last be forgotten, all other means are unavailing, thus I am sure I have seen life preserved in some instances, and in others a kind of artificial existence kept up in the dying, for two or three days, without exciting redness, or even sensation. Soreness of the skin occurring, was always auspicious, and gave hope recovery.

The great importance of preserving the temperature, should never be forgotten. Warmth is as essential to our existence, as air or aliment, as we reduce its offensive stimulus when accumulated in the ardent fever, it is equally necessa

necessary, when from too great expenditure of life it ceases to be generated, to supply it by art.

The great remedial power of heat, does not seem to have been rightly appreciated. To enter here on considerations of this nature, would be foreign to my subject. But having spoken of its particular application in this disease, and aware that there is something novel in the practice, I may be indulged in introducing the case, to me an interesting one, from which I derived my first impressions of its remedial value.

In the spring of 1820, a young man, having laboured nearly two days, under the influence of a poison, taken with a view to suicide, for the last twenty four hours buoyed on the lowest ebb of life, was sent by Doctors Chapman, and Stewart, under whose care he had been, to the Alms-house. Now in articulo mortis, no one entertained hope of his recovery. He gasped and threw back his head

and shoulders at every inspiration, his pulse was slow, interupted, and almost imperceptible, his extremities cold, his abdomen tense, his forehead glazed, his eye half open, and fixed, the pupil dilated, and quite insensible.

Having pumped out the contents of the stomach, and injected into it wine whey, he was well rubbed and mustard applied to his stomach, and extremities. now waiting the event which was expected every minute. After about an hour his pulse ceased, his breathing was interupted, and almost suspended, at the moment it occurred to me, to try, as a dernier, what might be the effect of pouring on him hot water. Before it could be procured, he had ceased to breathe one minute. I caught it up, and poured a stream boiling upon his bosom, his countenance was at the instant, thrown into the most frightful distortions, and the eye wide open, that those around him were startled, with surprise. Strong

convulsive motions affected the muscles of the thorax, and he breathed with astonishing vehemence and stertor. So much so as to disengage a quantity of mucous collected in the trachea. I had the satisfaction to perceive in a few minutes, the pulse at the wrist, and to find his breathing kept up, by Rubbing him, and rolling him in bed. As his breathing began to fail, I again poured hot water on his breast, with a repetition of the same violent effect, by which his skin was inflamed and vesicated.

Having produced redness of the wrists, and ankles, by the same means, which caused for a time a strong contraction of the muscles of the extremities, from the pain it gave, he was kept warm by hot bricks and blankets. It was now about eight of the evening, I staid with him all night.

Such was the relief which the stomach obtained, from the strong counterimpression of the scald, and through it, such the general relief,

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that by midnight, his respiration was greatly improved, and his pulse began to flow with freedom.

By three, there was such a reaction, as indicated by the pulse, and the warmth of the skin, that I ventured to remove three or four ounces of blood.

He now so much improved, that I was confident of success, when at eight in the morning, I was suddenly disappointed of my hope, by a strong convulsive fit, from which he did not recover. I had no hot water by to try again its power, but have not forgotten its effects.

Returning to the fever, we find a case in which the patient has outlived the inflammation of the stomach, but from the great expenditure of excitability, that organ is not immediately reinstated in its healthy actions, but there is a torpor corresponding with that, which has occurred in the skin. A case from which deductions may be made, proving the degree of insensibility sometimes occurring, and pointing out the ap-

appropriate treatment, may be here advantageously introduced, being of this description, and thinking the patient about to expire, I directed the nurse, to give a large spoon, every half hour, of the volatile julep, to be washed down by a few spoons of hot, spiced, brandy, and to rub his skin with the following mixture, mustard ℥i, cayenne ℥i. oil of turpentine ℥iv. The next morning I was delighted, with the improvement made in the patient. To test the nurses, it was my habit always to require of them, to repeat to me the directions last given, When to my astonishment, I found that by mistake, he had given the patient the whole amount of the mustard, cayenne, and turpentine internally, bathing him in the volatile mixture. Sensibility slow in returning, he only complained of the few last doses burning his throat, now supporting the awakened excitability, by gentler means, he recovered.

Though I believe cases are exceedingly rare, in which such a practice might be imitated, I thought

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With a view to a strong impression upon a torpid stomach, large doses of the oil of turpentine, were given with great advantage, a medicine which seemed to find a place in every form of the disease, to the irritable stomach, there was nothing more soothing, and on the pulse, the effect was proportionally salutary, Combined with sweet oil, it formed a very convenient purge, not less advantageous in the forming stage, than after reduction of excitement. By its very pervading influence, it in a remarkable manner promoted the secretions, especially that of the kidneys, which were constantly torpid. It was always comforting to the stomach, even when large doses were taken, at a time, when all other articles so stimulating, would have exacerbated the fever. Such unaccountable partialities, between medicines and diseases, are in other instances displayed.

From analogy, but more from the facts

before us, there is reason to hope, that turpentine, as suggested by Doctor Chapman, may prove the appropriate counter-agent to the peculiar poison of this disease.

The remedy which shall abridge the desolating power of the yellow fever, is of all others the most deididerated.

Times have been, when humanity has entrusted her all to the genius of medicine. Such times may soon be here, then never should she slumber, whilst any doubt enshrouds such momentuous questions.

I have now concluded what I had to remark, on the Gastrobilious fever. But one remove further, and we arrive at the last link in the chain.

The Gastric Fever.

differed from the other forms of the disease, in the entire absence of bile, in its undivided reign from the first to the last, in the stomach,

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in its being the consummate effect, of the poison which generates it. In its awful fatality, it is emphatically a malignant fever. Sometimes the sure finger of death, was evident from the first, and could not be averted. "Non vota non visulla correptos levant." Indeed its symptoms, were nearly allied to those produced by a mortal, corrosive poison, taken into the stomach.

Located pre-eminently in the stomach, the fountain head of numerous and important vital sympathies, is at once cut off. Systems owing the harmony and integrity of their movements, to the health of the stomach, are merged in confusion. The great polar star which gave light to the operations of mind, and controlled the sensative organs, the circulation, and the secretions has fallen. Animal temperature is unequally diffused.

Whilst an humbler disease, restricted by the authority of the vital government, pursues a more

obvious path, this on the contrary, void of form, trackless, and superior to control, partakes of every species of irregularity, and is often inscrutable to the most perspicacious eye, and under the most successful treatment, hitherto devised, fatal perhaps in the ratio of one half. But from what has been done, since the elucidations, which the dissections of Doctor Physic, and of my preceptor, the late and much lamented Doctor Dorsey have afforded us, I believe there is less reason to despair of success, if the disease is combated on equal ground. Recollecting its local, and inflammatory nature, and that it is the product of a peculiar poison, itself peculiar, an early and decisive effort is to be made, Conjoining those means, which most effectually counteract the disease, Whilst they reduce the excitement, In short, the precise treatment, which has most of my confidence, is briefly as follows., Beginning in the forming stage, without which, no plan

can be successful, blood is to be drawn to an extent, which the emergency of the case, and the reactive powers of the system alone, must limit. At the same time, a blister of the most active kind, is to be applied, sufficiently large, to embrace the whole region of the stomach.

Discarding emetics, as altogether dangerous, I would cleanse the primæ viæ with Calomel, which has proved itself in this place the least irritating, if not the most certain of the cathartics — Adding a quietus to the stomach, for this purpose amongst the means formerly mentioned, nothing answered better in a generality of cases, than the Spiritus terebinthinæ, in the usual way, or a large quantity of this medicine, obtunding its pungency, by the addition of sweet oil, with a view to quicken the operation of the Calomel.

We were using it as an Anti-emetic with advantage, and in the last stage of the

disorder, as a cordial stimulant, to arouse the sensibility of the stomach, or recover it from a tendency to gangrene, when we had the favourable reports from the City Hospital, of its use as a Counter agent, when given early in the disease, these reports were calculated to inspire confidence in the remedy. The view that suggested the practice, seemed rational, it was in a few instances imitated, and the result entirely surpassed my expectations.

There is no appearance that can present in this disease, that may be considered unimportant. Every adverse symptom, is to be combatted on the threshold. But as my opportunities of observing this multiform disease have been too limited to warrant any remarks, and desiring in this place, to depart only what my own eyes have witnessed, I will leave it to those whose experience is ample, to fill up the picture.

On Dissections.

As histories of cases in detail, would be unnecessarily tedious, I shall but make a few general remarks, inclusive of the more uniform morbid appearances, which will better explain the pathological view, which I have exhibited, and the propriety of my nosological classification. I will introduce three cases which merit particular attention, as striking specimens, of that variety of phenomina, which with little exception occurred in the stomach. These were brothers, between the age of seven, and fourteen, who all sickened on the same day. I was informed their father had purchased from on ship board, a quantity of damaged potatoes, which had been some days kept putrid, and offensive in the house which they occupied, when they became ill of a fever, which was of the Gastro Bilious form,

I learned that they had vomited much of bilious matter, on the first day, which, on the second, when first I saw them, had subsided. These were cases of very extraordinary virulence. It did not appear, that an adequate impression could at this time be made, by any treatment. And they were remarkable, for the exact correspondence of symptoms in each. They were in a state of constant jactitation, rolling, and tossing their arms, they sighed deeply, & sometimes uttered broken, inarticulate cries, as if suddenly pierced with a dagger. Their delirium, was at all times such, that they recognised nothing aright, and were so unconscious, amid the agony they suffered, that when urged to say how they felt, they generally answered, very well. Their eyes were inflamed, and commonly closed, & tears frequently issued from them. The ab-

abdomen was tense, and extremely tender. I saw one of them rise frantic from his bed, and attempt to jump out of the window of the 2nd story. In a few minutes afterwards, his mouth filled with a dark matter, and he died in convulsions, being between the third, and fourth day of his disease.

His stomach was found to be highly inflamed, containing a bilious black vomit, that is, tinged with bile, the liver was congested, and enlarged, the gall bladder was full of dark bile.

The second died on the fifth day, his stomach was found full of black vomit, with no admixture of bile, and merely exhibited a blush of inflammation, the liver was quite pale, and the gall bladder, contained but a thin mucous matter, unlike bile, notwithstanding this, that the liver had been affected, at one time, was evident, from the early bilious vomit, but the case was pro-

protracted, until the counter impression on the stomach, had time to cause the liver to be relieved. From the extreme tenderness of the stomach, and from the black vomit, which it now contained, there was sufficient evidence, of its having been inflamed, but it had time to be relieved of the appearance of inflammation, before death, by the secretion of black vomit.

The stomach is more than any other organ, capable of immediate transmutations, from health to the varied conditions of disease, et vice versa. Its susceptibility to morbid impressions, is greater, and its recuperative powers, are in the same ratio.

The third case, corresponding in its more prominent features, with those just described, survived until the seventh day, neither black vomit, nor sign of inflammation, was found in the stomach, though a matter of this description, had escaped him before death, by involuntary

stool, and was now found in the colon, and rectum, A discharge of similar matter, occurs in other cases before death, and as a symptom, may be regarded equally as fatal, as the black vomit. The liver in this instance also, was pale, and the gall bladder quite empty.

These three cases, were striking instances of what constantly occurred, for it was found in all dying immediately after the inflammation appeared in in the stomach, at whatever period of the disease, it might have taken place, that the stomach was highly injected with blood, or inflamed, and might, or might not, contain black vomit.

The symptoms of inflammation of the stomach, having longer endured, this viscus was found to contain black vomit, but the inflammation, the source of the secretion, did not necessarily appear after death.

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period, not of the disease, but of the inflammation, for as already explained, those periods often differed widely, the stomach was not found to be inflamed, neither did it contain black vomit, the inflammation having subsided, and the black vomit if any, having been evacuated, or essentially changed.

It is remarkable, that whilst black vomit was in so few instances, thrown up by the living, it was frequently found in the stomach of the dead, which was found more frequently inflamed, than containing black vomit.

The degree of inflammation of the stomach, from post mortem evidence, was very various, from a mere blush, to the fullest injection of its vessels, sometimes affecting only the pyloric extremity, or appearing in spots. In some few instances, inflammation was seen to extend to the different divisions of the intestines, and in two cases, the stomach was so sphacelated, that its inner coat, was easily rubbed off,

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The liver, was most commonly pale, and sometimes the gall bladder, was quite empty, but in this, there was no uniformity, it being sometimes quite full of a very dark, and at other times perfectly natural bile. And it has contained a small quantity of bile, mingled with serum, And I have seen more than once, a thin serous fluid, without the least tinge of bile, in the gall bladder.

There were not wanting instances, in which the urinary apparatus, appeared to have sympathized in a manner equally remarkable. In those terminating fatally, the urine, with few exceptions, was deficient. And I have found the bladder quite empty, or containing an imperfect urine, mingled with mucous, or discoloured with blood, or of a deep yellow tinge. Even the thickened coats of the bladder, have obscurely exhibited, traces of inflammation.

The vessels of the pia mater, and of the

the substance of the brain, were frequently injected with blood, and effusions of water, frequently of a saffron yellow, have been found in the ventricles of the brain, and there was sometimes, a more than natural determination of blood, to the vessels of the spinal marrow.